

THE RELATIONSHIP AMONG LEARNING DISCIPLINE, LEARNING INTERACTION WITH PEERS AND PARENT'S ATTENTION WITH LEARNING ACHIEVEMENT OF MATHEMATICS

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ABSTRACT

This research is motivated by VII students of SMP Negeri 9 Yogyakarta. They are less disciplined in learning, lack learning interaction with peers, and lack parental attention. This study aims to determine whether or not a positive and significant relationship among learning discipline, learning interaction with peers, and parents' attention with learning achievement of mathematics students class VIII State Junior High School (SMP Negeri) 9 Yogyakarta in odd semester academic year 2017/2018. This research population comprises all students in grade VIII of SMP Negeri 9 Yogyakarta in the odd semester academic year 2017/2018, consisting of grades VIIIA, VIIIB, VIIC, VIID, and VIIIE VIIF, totaling 203 students. Sampling technique using random sampling technique and class VIII D is chosen as the sample class. The instrument of collecting data using a learning discipline questionnaire, a learning interaction questionnaire with peers, and the parent's attention and mathematics test questionnaire. The analysis prerequisite test includes a normality test, linearity tests, and independent tests. Data analysis to hypotheses testing using correlation analysis product-moment and double linear regression analysis. This research shows that if there is positive and significant learning discipline, learning interaction with peers and parents' attention with learning achievement of mathematics students class VIII SMP Negeri 9 Yogyakarta in the odd semester academic year 2017/2018. This is indicated by $F_{\text{count}} = 5,29268$ and $F_{\text{table}} = 2,92228$, $F_{\text{count}} > F_{\text{table}}$ with $R = 0,5883$ and $R^2 = 0,3460$ with $\hat{Y} = 63,5330 + 0,3465 X_1 + 0,4216 X_2 + 0,2243 X_3$. Big relative contribution $X_1 = 34,00 \%$, $X_2 = 38,12 \%$, $X_3 = 27,88\%$, and effective contribution $X_1 = 11,76 \%$, $X_2 = 13,19 \%$ dan $X_3 = 9,65 \%$.

Keywords: Learning Discipline, Learning Interaction with Peers, Parent's Attention, Learning Achievement of Mathematics

INTRODUCTION

Education is a process undertaken by someone to develop the potential for him, intellectual, emotional, physical, and spiritual. Education is an essential requirement for every individual. Through education, someone can adapt and get to know the surrounding environment. Aside from being a means of education, adaptation can also improve human resources. Increasing human resources can be done through education in schools. Schools are institutions designed to improve human resources under the supervision of teachers. Through school, a person acquires knowledge that is used as a basis for developing one's potential. One of the subjects that can be used as a basis in mathematics.

Mathematics is a basic science closely related to other subjects, but mathematics is still considered a difficult subject in reality. This resulted in the poor learning outcomes of mathematics. Given the importance of mathematics as basic science, it is necessary to improve mathematics quality and learning. Based on the End of Year Assessment (PAT), the results of learning mathematics in class VII of SMP Negeri 9 Yogyakarta are still low. This is shown from the number of students who have not met the Minimum Completeness Criteria (MCC) mathematics subjects in class VII of SMP Negeri 9 Yogyakarta in the 2016/2017 school year.

From the interview results with Sri Sudarini, a grade VII mathematics teacher in SMP Negeri 9 Yogyakarta on April 13, 2017, many factors influence the poor learning outcomes, for example, discipline, interest, learning interaction, and learning facilities. The discipline of studying mathematics in class VII of SMP Negeri 9 Yogyakarta is still lacking. When learning occurs, there are still students

outside the classroom when teaching and learning hours begin. After the teaching and learning activities occur, some students are not disciplined in doing the teacher's assignments. While other students are working, some students play. Some even go up to the window during the learning process. The students' interest in learning mathematics was lacking because they only focused on the first ten minutes of teaching and learning activities. Also, schools' mathematics learning facilities are incomplete. For example, a set of rulers for blackboards should have one math teacher. However, each has only one ruler for three teachers who are used interchangeably and incomplete mathematical teaching aids and the absence of a special room. To save the math props.

The next factor is learning interaction with peers. At the time of group work in class, only a few students did the work. In contrast, the other students discussed other things that were not related to the material being discussed. Many students were still influenced by their peers towards not suitable, such as singing and chatting. At the same time, mathematics took place, so the learning process is not optimal. Also, suppose students have difficulty understanding the material. In that case, they are reluctant to ask other students due to shame and fear of being ridiculed. In comparison, students who can understand the material are reluctant to share their knowledge because they fear competition and low grades. This shows that the lack of positive learning interactions between students when learning takes place.

From the results of interviews with several VII grade students on April 13, 2017, they assumed that mathematics was challenging to describe in words because mathematics was a complicated subject. Some students had not received the attention of their parents regarding learning outcomes in school. Some parents have not accompanied students when studying at home and did not ask how their school activities and daily test scores. This shows the lack of parental attention to student learning outcomes both at school and at home as a factor for student success.

Based on the above problems, researchers are interested in researching the Relationship of Learning Discipline, Learning Interactions with Peers, and Parents' Attention with Mathematics Learning Outcomes. Based on the background and boundaries of the problem, it can be formulated the problem to be investigated is: 1) Is there a positive and significant relationship between learning discipline and mathematics learning outcomes of eighth-grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018? 2) Is there a positive and significant relationship between interactions with peers and mathematics learning outcomes of students of class VIII of SMP Negeri 9 Yogyakarta in the odd semester of the 2017/2018 school year? 3) Is there a positive and significant relationship between parents' attention and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018? 4) Is there a positive and significant relationship between learning discipline and learning interactions with peers at home with mathematics learning outcomes of students of VIII SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018? 5) Is there a positive and significant relationship between learning discipline and parents' attention with mathematics learning outcomes of VIII students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018? 6) Is there a positive and significant relationship between learning interactions with peers and parents' attention with mathematics learning outcomes of VIII students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018? 7) Is there a positive and significant relationship between learning discipline, learning interactions with peers, and parents' attention with mathematics learning outcomes for students of class VIII at SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018?

This research aims to determine whether or not: 1) A positive and significant relationship between learning discipline and mathematics learning outcomes of eighth-grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 2) A positive and significant relationship between interactions with peers and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 3) A positive and significant relationship between parents' attention and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 4) A positive and significant

relationship between learning discipline and learning interactions with peers with mathematics learning outcomes of VIII students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 5) A positive and significant relationship between learning discipline and parental attention with mathematics learning outcomes of students of VIII SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 6) A positive and significant relationship between learning interactions with peers and parents' attention with mathematics learning outcomes of VIII students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. 7) A positive and significant relationship between learning discipline, learning interactions with peers, and parents' attention with the mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018.

METHODS

This research is classified as quantitative research. The research place was conducted at Yogyakarta SMP Negeri 9 odd semester of the 2017/2018 school year. According to Sugiyono (2012: 297), the population is a generalization area consisting of objects/subjects with certain qualities and characteristics determined by researchers to be studied and then conclusions drawn. This study's population were all eighth-grade students of SMP Negeri 9 Yogyakarta, an odd semester of the academic year 2017/2018 consisting of 6 classes. The sample is a portion or representative of the population under study. Named sample research if we intend to generalize sample research results. What is meant by generalization is lifting the conclusion of research as something that applies to the population (Arikunto, Suharsimi, 2010: 174-175).

In this study, samples were taken at random using a random sampling technique for class. It is said random because the sampling class is done randomly from the existing class. After all, the ability of each class in the population is the same. The sample class taken is VIII D, and the test class is VIII E. The research variables are two variables, and they are the independent variable and the dependent variable. The independent variable (Independent) consists of learning discipline (X_1), learning interaction with peers (X_2), and parents' attention (X_3), while the dependent variable (dependent) is the result of learning mathematics (Y). Data collection techniques used questionnaires and test methods. According to Sugiyono (2012: 199) Questionnaire (questionnaire) is a data collection technique done by giving a set of questions or written statements to respondents to answer. Simultaneously, the test is a series of questions or exercises and other tools used to measure skills, knowledge of intelligence, abilities, or talents possessed by individuals or groups (Arikunto, Suharsimi, 2010: 193).

In this study, the questionnaire method was used to obtain data on learning discipline, learning interactions with peers, and parents' attention. The test method is used to obtain data about mathematics learning outcomes of students of class VIII at SMP Negeri 9 Yogyakarta. The questionnaire test uses the reviewers' content validity test and the instrument reliability test with the alpha formula. In contrast, the test instrument questions use the content validity test by the reviewers and the product-moment correlation technique, the difference power test, and the instrument reliability test with the KR-20 formula (Suharsimi Arikunto. 2012: 115). After the data is collected, the analysis prerequisite tests must be met normality test, independence test, and linearity test. Data analysis uses product-moment correlation analysis and multiple linear regression analysis.

RESULTS AND DISCUSSION

This normality test is used to test the distribution of data obtained by each variable, whether normally distributed. The summary of the normality test results from the four variables as in Table 1.

Table 1. Summary of Test Results for Study Variables Normality

No	Variable	χ^2_{count}	χ^2_{table}	df	Info.
1	Learning Discipline (X_1)	4,715	7,815	3	Normal
2	Learning Interactions with Peers (X_2)	3,627	7,815	3	Normal
3	Parents attention (X_3)	4,495	7,815	3	Normal
4	Mathematical Learning Outcomes (Y)	6,058	7,815	3	Normal

The independence test is used to find out whether or not there is a relationship between independent variables. A summary of the results of the independent tests of the three independent variables, as in Table 2.

Table 2. Summary of Test Results for Research Variables

No	Variable	χ^2_{count}	χ^2_{table}	df	Info.
1	X_1 to X_2	329,463	437,625	25	Independent
2	X_1 to X_3	213,342	437,625	25	Independent
3	X_2 to X_3	230,770	437,625	25	Independent

The linearity test is used to find out between independent variables and dependent variables, whether they have a linear relationship or not. Summary of the linearity test results of the four variables, as in Table 3.

Table 3. Summary of Linearity Test Results for Research Variables

No	Variable	F_{count}	F_{table}	Info.
1	X_1 to Y	0,777	2,54	Linear
2	X_2 to Y	1,111	2,64	Linear
3	X_3 to Y	0,528	2,54	Linear

In the first hypothesis test, a simple correlation coefficient (r) of 0.3526 was obtained. The coefficient of determination (r^2) is obtained for 0.1243, which can be explained that 12.43% of learning outcomes are influenced by learning discipline. In contrast, the rest is influenced by other factors. The learning discipline explains the variation in mathematics learning outcomes (Y) (X_1) through the linear line $\hat{Y} = 43,0166 + 0.4077 X_1$, with a regression coefficient of 0.4077. This means that every increase of one unit X_1 results in a 0.4077 increase in Y. The first hypothesis test result is that there is a positive and significant relationship between learning discipline and mathematics learning outcomes. In other words, the higher the student's discipline, the better the student's learning outcomes.

In the second hypothesis test, a correlation coefficient (r) of 0.5286 is obtained. The obtained coefficient of determination (r^2) of 0.2795 can explain that 27.95% of learning outcomes are influenced by learning interactions with peers. In contrast, the rest is influenced by other factors. There are variations in mathematics learning outcomes (Y), which are explained by learning interactions with peers (X_2) through linear lines $\hat{Y} = 4,6454 + 0,8143 X_2$, with a regression direction of 0.8143. This means that each increase of one unit X_2 results in a 0.8143 increase in Y. The second hypothesis test result is a positive and significant relationship between learning interactions with peers with mathematics learning outcomes. The results of this study are by research conducted by Khoiriyah, Marifatun (2016) with the topic "The Relationship between Numerical Ability, Mathematical Connection Ability and Classroom Student Interaction with Mathematics Learning Outcomes Class XI Science Students Even Semester of State High School 2 Banguntapan Bantul Regency 2015 / 2016 ". The results show a relationship between peer learning interactions with student mathematics learning outcomes with $t_{\text{count}} = 3,327 > t_{\text{table}} = 3,028$. In other words, the higher the interaction of learning with students' peers, the higher the learning outcomes.

In the third hypothesis test, the correlation coefficient obtained (r) of So obtained (r^2) of 0.268567449 can explain 26.86% of learning outcomes influenced by parents' attention. Other factors influence the rest. There is a variation in mathematics learning outcomes (Y) explained by parents' attention (X_3) through a linear line $\hat{Y} = 31,68003652 + 0,479124067 X_3$ with a regression coefficient direction of 0.4791. This means that the regression coefficient X_3 results in a 0.4791 increase in Y. The third hypothesis test result is a positive and significant relationship between parents' attention and mathematics learning outcomes. This study's results are also by what was stated (Slameto, 2010: 61) that parents who ignore their children's education can cause children to be less successful in their learning. Maybe the children themselves are smart, but because learning is not organized, ultimately difficulties accumulate. They experience lagging in learning, and finally, children are lazy to learn. In other words, if parents pay attention to children's learning by fulfilling all their learning needs, the child tends to be motivated to study hard so that the learning outcomes will be better.

The multiple correlation analysis obtained the value of the multiple correlation coefficient (R) of 0.5351. This study also obtained a coefficient of determination (R^2) of 0.2863, meaning 28.63% of learning outcomes are influenced by learning discipline and learning interactions with peers. In contrast, the rest is influenced by other factors. There are variations in mathematics learning outcomes (Y) that can be explained by learning discipline (X_1) and peer learning interactions (X_2) through linear lines $\hat{Y} = 2,0830 + 0,1130 X_1 + 0,7337 X_2$. This means an increase in one unit (X_1) results in a 0.0271 increase in Y. An increase in one unit (X_2) results in a 0.7961 increase in Y.

In contrast, the relative contribution of X_1 was 12.04%, and X_2 was 87.96%. The effective contribution of X_1 was 3.45%, and X_2 was 25.18%. The fourth hypothesis test result is a positive and significant relationship between learning discipline and learning interactions with peers and mathematics learning outcomes. In other words, the higher the student's ability to discipline mathematics, the better student learning outcomes will be. Likewise, with the discipline of learning, the higher the discipline of learning students have in mathematics, the better the learning outcomes.

In the multiple correlation analysis, the multiple correlation coefficient (R) value was obtained at 0.5616. This study also obtained a coefficient of determination (R^2) of 0.3154, meaning that 29.72% of learning outcomes are influenced by learning discipline and parental attention. Other factors influence the rest. There are variations in mathematics learning outcomes (Y), which can be explained by the discipline of learning (X_1) and parents' attention (X_3) through linear lines $\hat{Y} = 14,5895 + 0,2607 X_1 + 0,4269 X_3$. This means an increase of one unit (X_1) resulted in 0,2607 increase in Y. An increase in one unit (X_3) resulted in 0,4269 an increase in Y. While for the relative contribution of X_1 by 25.20% and X_3 by 74.80% and effective contribution of X_1 by 7.95% and X_3 at 23.59%. The fifth hypothesis test result is a positive and significant relationship between learning discipline and parents' attention to mathematics learning outcomes. In other words, the higher the discipline of student learning, the student learning outcomes will also be better. Similarly, parents' attention, parents' better attention, and learning mathematics will be more improved.

From the multiple correlation analysis, the multiple correlation coefficient (R) value is 0.6639. This study also obtained a coefficient of determination (R^2) of 0.4408, meaning 44.08% of learning outcomes are influenced by learning interactions with peers and parents' attention. Other factors influence the rest. There are variations in mathematics learning outcomes (Y), which can be explained by learning interactions with peers (X_2) and parents' attention (X_3) through linear lines $\hat{Y} = -18,7999 + 0,6591 X_2 + 0,3829 X_3$. This means an increase in one unit (X_2) resulted in a 0.6591 increase in Y. An increase in one unit (X_3) resulted in a 0.3829 increase in Y. While for relative contributions, X_2 amounted to 51.31% and X_3 amounted to 48.69% and effective contributions X_2 is 22.62%, and X_3 is 21.46%. The sixth hypothesis test results show a positive and significant relationship between learning interactions with peers and parents' attention to mathematics learning outcomes. The interaction of learning with high peers will affect learning outcomes in mathematics become more

improved. Likewise, with good parents' attention, children will be more eager to carry out their obligations as students who are learning to get good learning outcomes.

The multiple correlation analysis obtained the value of the multiple correlation coefficient (R) of 0.5883. This study also obtained a coefficient of determination (R^2) of 0.3460, meaning 36.40% is influenced by learning discipline, learning interactions with peers, and parents' attention while the rest by other factors. Variations in mathematics learning outcomes (Y) can be explained by learning discipline (X_1), learning interactions with peers (X_2), and parents' attention (X_3) through linear lines $\hat{Y} = 63,5330 + 0,3465 X_1 + 0,4216 X_2 + 0,2243 X_3$. This means an increase in one unit (X_1) resulted in a 0.3465 increase in Y , an increase in one unit (X_2) resulted in a 0,4216 increase in Y . An increase in one unit (X_3) resulted in a 0,2243 increase in Y . As for the relative contribution of X_1 by 34, 00%, X_2 relative contributions amounted to 38.12% and X_3 relative contributions 27.88% and X_1 effective contributions 11.76%, X_2 13.19%, and X_3 effective contributions 9.65%. The seventh hypothesis test results show a positive and significant relationship between learning discipline, learning interactions with peers, and parents' attention to mathematics learning outcomes. In other words, the higher the discipline of student learning, the better the learning outcomes. Likewise, with learning with students' high mathematics peers, the learning outcomes will be even better. Parents' attention can also influence mathematics learning outcomes. The higher the attention of parents to children, the higher the learning outcomes. Vice versa.

CONCLUSION

Based on the results of research and discussion as described above, conclusions can be drawn:

1. There is a positive and significant relationship between learning discipline and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the t-test that is $t_{\text{count}} > t_{\text{table}}$ or $2.1316 > 1.6939$. Simple correlation coefficient (r) between learning discipline with mathematics learning outcomes of 0.3526 with a linear regression equation $\hat{Y} = 43,0166 + 0,4077 X_1$.
2. There is a positive and significant relationship between learning interactions with peers with mathematics learning outcomes of students of class VIII SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the t-test that is $t_{\text{count}} > t_{\text{table}}$ or $3.5230 > 1.6939$. Simple correlation coefficient (r) between learning interactions with peers with mathematics learning outcomes of 0.5286 with a linear regression equation $\hat{Y} = 4,6454 + 0,8143 X_2$.
3. There is a positive and significant relationship between parents' attention and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the t-test that is $t_{\text{count}} > t_{\text{table}}$ or $3.4278 > 1.6939$. Simple correlation coefficient (r) between the attention of parents with mathematics learning outcomes of 0.5182 with a linear regression equation $\hat{Y} = 31,680036352 + 0,479124067 X_3$.
4. There is a positive and significant relationship between learning discipline and learning interactions with peers with mathematics learning outcomes of students of class VIII of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the F-test that is $F_{\text{count}} > F_{\text{table}}$ or $6.2176 > 3.30482$. The multiple correlation coefficient (R) between learning discipline and learning interactions with peers with mathematics learning outcomes of 0.5351 and (R^2) of 0.2863 with multiple linear regression equations $\hat{Y} = 3,0830 + 0,1130 X_1 + 0,7337 X_2$.
5. There is a positive and significant relationship between learning discipline and parents' attention with the mathematics learning outcomes of eighth-grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the F-test that is $F_{\text{count}} > F_{\text{table}}$ or $7.1422 > 3.30482$. The multiple correlation coefficient (R) between learning discipline and parents' attention with mathematics learning outcomes is 0.5616 and (R^2) is 0.3154 with a double linear regression equation $\hat{Y} = 14,5895 + 0,2607 X_1 + 0,4269 X_3$.

6. There is a positive and significant relationship between learning interactions with peers and parents' attention with mathematics learning outcomes of eighth-grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the F-test that is $F_{\text{count}} > F_{\text{table}}$ or $12.219075 > 3.30482$. The multiple correlation coefficient (R) between learning interactions with peers and parents' attention with mathematics learning outcomes of 0.6639 and (R^2) of 0.4408 with multiple linear regression equation $\hat{Y} = -18,7999 + 0,6591 X_2 + 0,3828 X_3$.
7. There is a positive and significant relationship between learning discipline, learning interactions with peers, and parents' attention with the mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta odd semester of the academic year 2017/2018. This is indicated by the F-test that is $F_{\text{count}} > F_{\text{table}}$ or $5.29268 > 2.92228$. The multiple correlation coefficient (R) between disciplined learning, learning interactions with peers, and parents' attention with mathematics learning outcomes of 0.5883 and (R^2) of 0.3460 with a double linear regression equation $\hat{Y} = 63,5330 + 0,3465 X_1 + 0,4216 X_2 + 0,2243 X_3$.

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